

CLAIMS

1. A method for providing a detergent-free washing function,

5 which comprises subjecting a fiber or a fiber product to hydrophilization treatment.

2. The method for providing a detergent-free washing function according to Claim 1,

10 wherein the hydrophilization treatment is carried out by at least one method selected from a group consisting of a method for introducing a hydrophilic group, a method for introducing a hydrophilic molecule, a method for improving the surface physically, and a method for applying a coating
15 agent containing a hydrophilic substance.

3. The method for providing a detergent-free washing function according to Claim 1 or 2,

20 wherein the fiber or fiber product contains at least a cellulose fiber, and the moisture absorption ratio of the cellulose fiber is adjusted to be 7.1% or higher by the hydrophilization treatment.

4. The method for providing a detergent-free washing
25 function according to Claim 3,

 wherein a carboxyl group is introduced into the cellulose fiber by carboxymethylation.

5. The method for providing a detergent-free washing
30 function according to Claim 4,

 wherein the cellulose fiber is brought into contact with a treatment solution containing an alkali metal hydroxide in a concentration of 20 to 100 g/L, monochloroacetic acid or a monochloroacetic acid alkali
35 metal salt in a concentration of 100 to 400 g/L at 10 to

40°C for 6 to 48 hours.

6. The method for providing a detergent-free washing function according to Claim 4 or 5,

5 wherein the carboxymethylation degree is adjusted to be 0.1 to 10% by mole.

7. The method for providing a detergent-free washing function according to Claim 3,

10 wherein graft polymerization to the cellulose fiber is carried out using at least one kind of monomer selected from a group consisting of methacrylamide, hydroxyethyl acrylate, acrylic acid, and methacrylic acid.

15 8. The method for providing a detergent-free washing function according to Claim 7,
 wherein the grafting ratio is adjusted to be 1 to 20%.

9. A fiber product capable of washing without using
20 a detergent,

 which contains a fiber subjected to hydrophilization treatment.

10. The fiber product capable of washing without
25 using a detergent according to Claim 9,

 wherein the hydrophilization treatment is carried out by at least one method selected from a group consisting of a method for introducing a hydrophilic group, a method for introducing a hydrophilic molecule, a method for improving
30 the surface physically, and a method for applying a coating agent containing a hydrophilic substance.

11. The fiber product capable of washing without
using a detergent according to Claim 9 or 10,

35 wherein the fiber subjected to the hydrophilization

treatment is a cellulose fiber having a moisture absorption ratio of 7.1% or higher subjected to the hydrophilization treatment.

5 12. The fiber product capable of washing without using a detergent according to Claim 11,
 wherein the cellulose fiber subjected to the hydrophilization treatment is a carboxymethylated cellulose fiber.

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 13. The fiber product capable of washing without using a detergent according to Claim 12,
 wherein the cellulose fiber subjected to the hydrophilization treatment is obtainable by bringing a
15 cellulose fiber into contact with a treatment solution containing an alkali metal hydroxide in a concentration of 20 to 100 g/L, monochloroacetic acid or a monochloroacetic acid alkali metal salt in a concentration of 100 to 400 g/L at 10 to 40°C for 6 to 48 hours.

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 14. The fiber product capable of washing without using a detergent according to Claim 12 or 13,
 wherein the carboxymethylated cellulose fiber has a carboxymethylation degree of 0.1 to 10% by mole.

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 15. The fiber product capable of washing without using a detergent according to Claim 11,
 wherein the cellulose fiber subjected to the hydrophilization treatment is a cellulose fiber grafted by
30 at least one kind of monomer selected from a group consisting of methacrylamide, hydroxyethyl acrylate, acrylic acid, and methacrylic acid.

 16. The fiber product capable of washing without
35 using a detergent according to Claim 15,

wherein the grafted cellulose fiber has a grafting ratio of 1 to 20%.